

Amendments to the Specification:

Please delete the paragraph beginning on page 2, line 22 and ending on page 3, line 4, which begins, "Due to strong spin-orbit coupling....." and replace with the following amended paragraph:

-- Due to strong spin-orbit coupling that leads to singlet-triplet state mixing, heavy metal complexes often display efficient phosphorescent emission from such triplets at room temperature. Accordingly, OLEDs comprising such complexes have been shown to have internal quantum efficiencies of more than 75% (Adachi, *et al.*, *Appl. Phys. Lett.*, **2000**, 78,1704). Certain organometallic iridium complexes have been reported as having intense phosphorescence (Lamansky, *et al.*, *Inorganic Chemistry*, **2001**, 40, 1704), and efficient OLEDs emitting in the green to red spectrum have been prepared with these complexes (Lamansky, *et al.*, *J. Am. Chem. Soc.*, **2001**, 123, 4304). Red-emitting devices containing iridium complexes have been prepared according to U.S. Application Publication No. 2001/0019782. Phosphorescent heavy metal organometallic complexes and their respective devices have also been the subject of International Patent Application Publications WO 00/57676, WO 00/70655, and WO 01/41512; and U.S. Ser. Nos. 09/274,609; 09/311,126; 09/452,346; 09/637,766; 60/283,814; and U.S. Ser. No. 09/978,455, filed October 16, 2001, entitled "Organometallic Compounds and Emission-Shifting Organic Electrophosphorescence" to Lamansky, *et al.* --

Please delete the paragraph beginning on page 19, line 23 and ending on page 20, line 17, which begins, "Together, A¹ and A² can also represent....." and replace with the following amended paragraph:

-- Together, A¹ and A² can also represent a bidentate ligand. Numerous bidentate ligands are known to those skilled in the art and many suitable examples are provided in Cotton and Wilkinson, *Advanced Inorganic Chemistry*, Fourth Ed., John Wiley & Sons, New York, 1980, which is incorporated herein by reference in its entirety. In some embodiments, bidentate ligands are monoanionic. Suitable bidentate ligands include acetylacetonate (acac), picolinate (pic), hexafluoroacetylacetonate, salicylidene, 8-hydroxyquinolate; amino acids, salicylaldehydes, and iminoacetates. Structure of some suitable bidentate ligands are provided in Figure 5. Bidentate ligands can also include biaryl compounds. In some

embodiments, the biaryl compounds coordinate to the metal atom through a carbon atom and a nitrogen atom. As used herein, the term "biaryl" refers to compounds comprising two aryl groups covalently joined by a single bond. The aryl groups of a biaryl compound can be aryl or heteroaryl, including both monocyclic or poly-cyclic aryl and heteroaryl groups. Examples of some biaryl groups are biphenyl, bipyridyl, phenylpyridyl, derivatives thereof and the like. Biaryl compounds can serve as bidentate ligands in metal coordination complexes, for instance, by coordinating through one atom in each of the two aryl groups. The coordinating atoms can be carbon or a heteroatom. Some further suitable bidentate ligands can include 2-(1-naphthyl)benzoxazole), 2-phenylbenzoxazole, 2-phenylbenzothiazole, coumarin, thienylpyridine, phenylpyridine, benzothienylpyridine, 3-methoxy-2-phenylpyridine, thienylpyridine, tolylpyridine, phenylimines, vinylpyridines, arylquinolines, pyridynaphthalenes, pyridylpyrroles, pyridylimidazoles, phenylindoles, derivatives thereof and the like. Further suitable bidentate ligands are provided in Figure 6 (wherein Z is O, S, or NR; R is R¹¹; and n represents the number of substituents R ranging from, for example, 0 to 5) and in U.S. Ser. Nos. 09/274,609; 09/311,126; 09/452,346; 09/637,766; 60/283,814; and U.S. Ser. No. 09/978,455, filed October 16, 2001, entitled "Organometallic Compounds and Emission-Shifting Organic Electrophosphorescence" to Lamansky, *et al.*, each of which is incorporated herein by reference in its entirety. --

Please delete the paragraph beginning on page 25, line 13 and ending on page 25, line 29, which begins, "The compounds of the present invention....." and replace with the following amended paragraph:

-- The compounds of the present invention can be photoluminescent. In some embodiments, the present compounds are efficient phosphors, having, for example, a significant portion of luminescence arising from phosphorescent emission. The compounds can emit at any color, including red, green, blue, and other colors (i.e., red-orange, blue-green, etc.). In some embodiments, the emission can be red or reddish. Color of emission can be estimated from the photoluminescence spectrum. A luminescence maximum of from about 550 to about 700 nm can indicate red or reddish emission. A maximum at lower wavelengths can indicate green or blue emission. Additionally, the color of emission for compounds of the present invention can be described by color index coordinates *x* and *y* (Commission

Internationale de L'Eclairage (CIE) 1931 standard 2-degree observer; see, e.g., Shoustikov, *et al.*, *IEEE Journal of Selected Topics in Quantum Electronics*, 1998, 4, 3; Dartnall, *et al.*, *Proceedings of the Royal Society of London B*, 1983, 220, 115; Gupta, *et al.*, *Journal of Photochemistry*, 1985, 30, 173; *Colorimetry*, 2nd ed., Publication CIE 15.2-1986 (ISBN 3-900-734-00-3); and ~~www.cie.co.at/cie/~~. For example, a compound emitting in the reds can have coordinates of from about 0.5 to about 0.8 for x and 0.2 to about 0.5 for y. Any set of color coordinates can be within reach of the compounds of the present invention. --

Please delete the paragraph beginning on page 28, line 27 and ending on page 29, line 19, which begins, "The compounds described herein....." and replace with the following amended paragraph:

-- The compounds described herein can be used as emitters in organic light emitting devices. Accordingly, the compounds can be present in an emissive layer (i.e., a layer from which light is primarily emitted) of a such device. The emissive layer can be, for example, a layer consisting essentially of one or more compounds of the present invention. The present compounds can also be present as dopants. For example, an emissive layer can comprise host material doped with one or more of the present compounds. The host material can comprise any compound, including organic and organometallic compounds, suitable in an emissive layer in an OLED. For example, organic host material can comprise BCP (bathocuproine or 2,9-dimethyl-4,7-diphenyl-1,10-phenanthroline), CBP (4,4'-N,N'-dicarbazole biphenyl), OXD7 (1,3-bis(N,N-*t*-butylphenyl)-1,3,4-oxadiazole), TAZ (3-phenyl-4-(1'-naphthyl)-5-phenyl-1,2,4-triazole), NPD (4,4'-bis[N-(1-naphthyl)-N-phenyl-amino] biphenyl), and the like. Other host material can comprise CuPc (copper phthalocyanine), Alq₃ (aluminum tris(8-hydroxyquinolate)), BAlq ((1,1'-biphenyl)-4-olato)bis(2-methyl-8-quinolinolato N1,O8)aluminum), and the like. Other materials that can be included in an emissive layer, in addition to the compounds of the present invention, include Irppy (tris(2-phenylpyridinato-N,C2')iridium(III)), FIrpic (bis(2-(4,6-difluorophenyl)pyridinato-N,C2')iridium(III)(picolinate)), and other metal complexes such as those described in U.S. Ser. Nos. 09/274,609; 09/311,126; 09/452,346; 09/637,766; 60/283,814; and U.S. Ser. No. 09/978,455, filed October 16, 2001, entitled "Organometallic Compounds and Emission-Shifting Organic Electrophosphorescence" to Lamansky, *et al.*, each of which is incorporated

herein by reference in its entirety. As dopants, the present compounds can be present in the emissive layer, such as in host material, in amounts of from about 1 to about 20 wt%, about 5 to about 15 wt%, about 5 to about 10 wt%, or other similar ranges. --

Please delete the paragraph beginning on page 30, line 18 and ending on page 31, line 5, which begins, "In some embodiments....." and replace with the following amended paragraph:

-- In some embodiments, devices of the present invention comprise further layers in addition to a layer comprising the present compounds (*e.g.*, an emissive layer). For example, in addition to the electrodes, devices can include any one or more hole blocking layers, electron blocking layers, exciton blocking layers, hole transporting layers, electron transporting layers, hole injection layers, or electron injection layers. Anodes can comprise an oxide material such as indium-tin oxide (ITO), Zn-In-SnO₂, SbO₂, or the like, and cathodes can comprises a metal layer such as Mg, Mg:Ag, or LiF:Al. Among other materials, the hole transporting layer (HTL) can comprise triaryl amines or metal complexes such as those described in U.S. Ser. Nos. 60/317,540 and 60/317,540, each of which is incorporated herein by reference in its entirety. Similarly, the electron transporting layer (ETL) can comprise, for example, aluminum tris(8-hydroxyquinolate) (Alq₃) or other suitable materials. Additionally, a hole injection layer can comprise, for example, 4,4',4''-tris(3-methylphenylphenylamino)triphenylamine (MTDATA) or polymeric material such as poly(3,4-ethylenedioxythiophene) (PEDOT), or metal complex such as, for example, copper phthalocyanine (CuPc), or other suitable materials. Hole blocking, electron blocking, and exciton blocking layers can comprise, for example, BCP, BAlq, and other suitable materials such as FIrpic or other metal complexes described in U.S. Ser. Nos. 60/317,540 and 60/317,540, each of which is incorporated herein by reference in its entirety. Compounds of the present invention can also be included in any of the above mentioned layers. --